

Amendments to the Claims

Please replace the prior listing of claims with the following listing.

1-15. (cancelled)

16. (Currently amended) A method of verifying that an object is genuine, including the steps of:

creating a genuine object having a primary identifier in the form of a plurality of identification elements embedded in the object, the identification elements being visually detectable by the naked eye when illuminated by electromagnetic radiation selected from the group consisting of infrared and ultraviolet, but being indistinguishable by the naked eye from the rest of the object when illuminated with visible light, wherein the identification elements are randomly distributed so that the positions of the identification elements are unique to the genuine object, and wherein the genuine object is provided with a reference point in the form of a printed symbol;

identifying a sub-area of the genuine object defined by the reference point;
illuminating the identification elements in the sub-area with electromagnetic radiation selected from the group consisting of infrared and ultraviolet;

creating a two-dimensional image of the electromagnetic radiation emitted by the identification elements in the sub-area;

using the two-dimensional image to measure the positions of the identification elements in the sub-area;

recording information relating to the positions of identification elements in the sub-area of the genuine object relative to the reference point; and

identifying a sub-area of an object to be verified defined by a reference point on the object to be verified;

illuminating the identification elements in the sub-area of the object to be verified with electromagnetic radiation selected from the group consisting of infrared and ultraviolet;

creating a two-dimensional image of the electromagnetic radiation emitted by the identification elements in the sub-area of the object to be verified; and

comparing measured information relating to the positions of the identification elements in an the object to be verified with the recorded information for the genuine object.

17. (original) A method as claimed in claim 16, wherein only information relating to identification elements within the sub-area of the genuine object is recorded.

18. (Cancelled)

19. (Cancelled)

20. (Previously presented) A method as claimed in claim 16, wherein the information relating to the positions of the identification elements in the genuine object is converted into an alphanumeric code and recorded in this form.

21. (original) A method as claimed in claim 20, wherein the alphanumeric code is unique to that object.

22. (Currently amended) A method as claimed in claim 20, wherein the measured information relating to the positions of identification elements in the object to be verified is converted into ~~also in the form of~~ an alphanumeric code, and the step of comparing the information comprises comparing these alphanumeric codes.

23. (original) A method as claimed in claim 22, wherein corresponding numbers in each alphanumeric code are compared to within a specified tolerance level.

24. (Previously presented) A method as claimed in claim 16, wherein the genuine object is provided with a secondary identifier, and the method includes the step of detecting and recording information relating to the secondary identifier.

25. (original) A method as claimed in claim 24, wherein the secondary identifier is unique to the object.

26. (Previously presented) A method as claimed in claim 24, wherein information relating to the object to be verified is only compared to recorded information relating to genuine objects having the same secondary identifier.

27. (Previously presented) A method as claimed in claim 16, wherein a plurality of genuine objects are created and recorded.

28. (Previously presented) A method as claimed in claim 16, wherein the identification elements are fluorescent, and the method includes the steps of illuminating the identification elements with ultraviolet light and detecting the emitted electromagnetic radiation with a camera.

29. (Previously presented) A method as claimed in claim 28, wherein an image created by the camera is analyzed and converted into alphanumeric data.

30. (Previously presented) A method as claimed in claim 16, wherein the genuine object comprises paper, and the method includes the step of adding the identification elements to the paper during the paper-making process.

31. (Currently amended) A detector for verifying that an object is genuine, the object comprising a primary identifier in the form of a plurality of identification elements embedded in the object, the identification elements being visually detectable visually by the naked eye when illuminated by electromagnetic radiation selected from the group consisting of infrared and ultraviolet, but being indistinguishable from the rest of the object when illuminated with visible light, the identification elements being randomly distributed so that the positions of the identification elements are unique to the object, and the object further comprising a reference point in the form of a printed symbol,

the detector comprising:

a source of electromagnetic radiation selected from the group consisting of infrared and ultraviolet;

a camera adapted to detect electromagnetic radiation emitted by said identification elements in a sub-area of said object defined by the reference point on said object to make a two-dimensional image when said sub-area is illuminated by said source of electromagnetic radiation;

image analysis equipment for converting said two-dimensional an image made by the camera into code;

a database into which the code can be recorded and from which codes relating to other recorded camera images can be retrieved; and

processing equipment adapted to compare the code relating to the object being verified with the other codes already stored in the database relating to recorded camera images;

wherein the detector is adapted to identify a sub-area of the object defined by the reference point and to record information relating to the positions of the identification elements in the sub-area relative to the reference point.

32. (Currently amended) A detector as claimed in claim 31, wherein the detector is adapted to detect the location of the reference point on the object and to direct the camera to the location of the reference point on the object ~~this part of the object~~.

33. (Previously presented) A detector as claimed in claim 31, wherein the detector is adapted to detect the location of the reference point on the object and to direct the image analysis equipment to a corresponding part of the image.

34. (Previously presented) A detector as claimed in claim 31, wherein the source of electromagnetic radiation comprises a source of ultraviolet light.

35. (Previously presented) A detector as claimed in claim 31, wherein the image analysis equipment is adapted to divide the camera image into a plurality of sub-regions and to count the number of pixels illuminated in each sub-region to produce code corresponding to the camera image.

36. (Previously presented) A detector as claimed in claim 31, wherein the detector is adapted to recognise and record information relating to a secondary identifier, and the processing equipment is adapted to compare the code relating to the object to be verified only to codes relating to recorded objects that have the same secondary identifier.